

Hide Items

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DATE: Friday, April 16, 2004

DB=USPT; PLUR=YES; OP=OR ☐ L53 5862052.pn. ☐ L52 5916306.pn.	1 1 1
•	1
Гі L52 5916306.pn.	1
	1
□ L51 5918233.pn.	1
□ L50 6028998.pn.	1
□ L49 6028998.pn.	1
DB=PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR=YES; OP=OR	
☐ L48 l45 and l46 and L47	2
☐ L47 latch adj object\$1	161
☐ L46 access adj object\$1	4964
☐ L45 hardware adj2 object\$1	599
□ L44 123 and L43	0
\Box L43 141 and L42 and 138 and 118	0
□ L42 713/100.ccls.	737
□ L41 713/1-2.ccls.	2009
☐ L40 orchestration adj object\$1	1
☐ L39 123 and L38	12
□ L48 145 and 146 and L47 □ L47 latch adj object\$1 □ L46 access adj object\$1 □ L45 hardware adj2 object\$1 □ L44 123 and L43 □ L43 141 and L42 and 138 and 118 □ L42 713/100.ccls. □ L40 orchestration adj object\$1 □ L39 123 and L38 □ L38 719/328.ccls. DB=USPT; PLUR=YES; OP=OR	669
DB=USPT; $PLUR=YES$; $OP=OR$	
□ L37 6480597.pn.	1
□ L36 5325532.pn.	1
□ L35 5691897.pn.	1
DB = PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR = YES; OP = OR	
☐ L34 119 and 132	0
☐ L33 123 and L32	0
☐ L32 control same latch same (layer\$1 and object\$1)	313
☐ L31 l23 and L30	0
☐ L30 control same latch same (layer\$1 or object\$1)	17730
DB=USPT; $PLUR=YES$; $OP=OR$	
□ L29 5987614.pn.	1
□ L28 6185514.pn.	1
DB = PGPB, USPT, USOC, EPAB, JPAB, DWPI, TDBD; PLUR = YES; OP = OR	
□ L27 123.ti.	2
DB=USPT; $PLUR=YES$; $OP=OR$	
☐ L26 l18 and L25	3

L25	hal and 123	151
L24	hal or L23	16626
L23	Hardware adj abstraction adj layer\$1	233
L22	wrapper\$1 and L21	0
L21	firmware same 119	28
L20	15 and L19	0
L19	control adj points	10532
L18	L7 or L8 or L9 or L10 or L11 or L12 or L13 or L14 or L15 or L16 or L17	1702
L17	(719/320).ccls.	75
L16	(719/319).ccls.	52
L15	(719/318).ccls.	202
L14	(719/317).ccls.	104
L13	(719/316).ccls.	230
L12	(719/315).ccls.	507
L11	(719/314).ccls.	82
L10	(719/313).ccls.	228
L9	(719/312).ccls.	86
L8	(719/311).ccls.	52
L7	(719/310).ccls.	340
L6	L5.ti.	1
L5	latch adj object\$1	40
L4	11 and 12	0
L3	11 and 12L2	0
L2	hardware adj control adj object\$1	1
L1	latch adj layer\$1	6

END OF SEARCH HISTORY

CITY

Santa Rosa

Santa Rosa

Santa Rosa

L32: Entry 2 of 313

File: PGPB

COUNTRY

US

US

US

STATE

CA

CA

CA

Oct 10, 2002

RULE-47

PGPUB-DOCUMENT-NUMBER: 20020147854

PGPUB-FILING-TYPE: new

DOCUMENT-IDENTIFIER: US 20020147854 A1

TITLE: Multi-layer software architecture for hardware control

PUBLICATION-DATE: October 10, 2002

INVENTOR - INFORMATION:

NAME
Prazier, Brian Edward
Sutton, Keith Jeffrey
Heyman, Thanh Thien Nguyen

APPL-NO: 09/ 825654 [PALM] DATE FILED: April 4, 2001

INT-CL: [07] $\underline{G06}$ \underline{F} $\underline{15}/\underline{163}$, $\underline{G06}$ \underline{F} $\underline{9}/\underline{54}$

the corresponding functional feature.

US-CL-PUBLISHED: 709/310; 709/311

US-CL-CURRENT: <u>719</u>/<u>310</u>

REPRESENTATIVE-FIGURES: 1

A software system having a multi-layer architecture for controlling a hardware system including a latch layer, a hardware control layer, an access layer, and an orchestration layer. The latch layer includes a latch object for each of a set of control points of the hardware system. Each latch object provides a common interface in the software system for accessing the corresponding control point. The hardware control layer includes a hardware control object for each of a set of sub-portions of the hardware system. Each hardware control object coordinates accesses to the control points of the corresponding sub-portion through the latch layer. The access layer includes an access object for each of a set of groupings of the sub-portions. Each access object coordinates accesses to the corresponding grouping of the sub-portions. The orchestration layer includes an orchestration object for each of a set of functional features of the hardware system. Each orchestration object provides a common interface in the software system for accessing a corresponding grouping of the access objects which are associated with

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L32: Entry 44 of 313

File: DWPI

Oct 10, 2002

DERWENT-ACC-NO: 2003-219647

DERWENT-WEEK: 200321

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TITLE: Software system for firmware and embedded systems has hardware control objects coordinating accesses to control points of hardware system through common interface provided by latch objects of latch layer

INVENTOR: FRAZIER, B E; HEYMAN, T T N; SUTTON, K J

PATENT-ASSIGNEE: FRAZIER B E (FRAZI), HEYMAN T T N (HEYMI), SUTTON K J (SUTTI)

PRIORITY-DATA: 2001US-0825654 (April-4, 2001)

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October 10, 2002

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INT-CL (IPC): $\underline{G06} + \underline{9/54}$; $\underline{G06} + \underline{15/163}$

ABSTRACTED-PUB-NO: US20020147854A

BASIC-ABSTRACT:

NOVELTY - A <u>latch object</u> (40) of a <u>latch layer</u> (500) provides a common interface in the software system for accessing corresponding <u>control</u> points of the hardware system. Each hardware <u>control object</u> (30) of the hardware <u>control layer</u> (510) coordinates accesses to the <u>control</u> points of the corresponding sub portion through the latch layer.

USE - Used in firmware systems such as embedded systems.

ADVANTAGE - Provides clarity and consistency in generating new control algorithms for a system as well as maintenance of a system and enables implementation of high level, texture based algorithm which require little knowledge of underlying hardware system.

DESCRIPTION OF DRAWING(S) - The figure shows the software system.

hardware control object 30

Latch object 40

ABSTRACTED-PUB-NO: US20020147854A

EQUIVALENT-ABSTRACTS:

Record Display Form

CHOSEN-DRAWING: Dwg.1/4

DERWENT-CLASS: T01

EPI-CODES: T01-F01B; T01-J20B;